ternal iodic treatment; and although they appeared after a longer lapse of time, when the remedy was applied externally, yet they remained more pertinaciously, showing that if the action of the medicine were a little less prompt, it acted more deeply and persistently than was the case when administered according to the usual method.—*Edinburgh Med. Journal*, Nov. 1869, from *Bull. Gén. de Thérap.*

MEDICAL PATHOLOGY AND THERAPEUTICS, AND PRACTICAL MEDICINE.

19. *Recent Researches on Phthisis.*—Dr. J. BURDON SANDERSON, well known by his important researches on artificial tuberculosis (appendix to reports of medical officers of privy council for 1868 and 1869; and preceding No. of this Journal, pp. 545–47) in a paper very recently published (*Edin. Med. Journ.*, Nov. 1869), which has especial interest at the present time, remarks: "In studying the development of consumption in man, it becomes more and more apparent that three distinct agencies are at work. Of these agencies one is so ill defined that we can only designate it a tendency. To some minds, I am aware, to talk of a constitutional tendency seems meaningless. I am not going to assert the possibility of disease existing absolutely independently of material change, but I do assert strenuously that disease may exist without its being possible to detect any anatomical or chemical basis for it. As regards pulmonary consumption, the fact of its so frequently attacking in succession several members of a large family shortly after adult life affords to me a proof beyond the possibility of dispute, that something phthisical exists in each such member. In this sense I believe in the existence of latent phthisis, but in no other. No proof has yet been given that, in individuals in whom this tendency exists, the solids or fluids are differently constituted from others. The latent condition can only be described as a tendency or liability, the nature of which is open to speculation.

"The second agency is irritation. The organs which are subject to injury are, above all, the mucous cavities which communicate with the external air. A common bronchial catarrh, not differing in any respect except its result from other bronchial catarrhs which terminate favourably, gradually assumes the characters of consumption. In the cases in which tuberculous processes originate from catarrhal inflammations of the genito-urinary organs, the same thing happens. Gonorrhœa leads to prostatitis, prostatitis to scrofulous catarrh of the bladder, which creeps upwards along one or both ureters, and produces induration and caseation of one kidney—that condition which is called renal phthisis. In both of these instances an indurative process, which ultimately becomes disintegrative—*i.e.*, a tuberculosis—begins from a simple catarrh of irritative origin.

"The third agency is that which I have designated throughout as *infection*. The word designates the fact, that whenever a chronic induration due to overcrowded corpusculation exists in any organ, it is apt to give rise to similar processes elsewhere.

"Although this is the point which artificial tuberculosis serves to illustrate, the notion does not owe its origin to the results of experiment. It was distinctly formalized at least twelve years ago by Buhl almost in the terms in which we are now disposed to accept it. Buhl, however, limited its application to cases in which there are miliary tubercles. He showed, in the first place, that in persons who die of that variety of fever which is characterized by the general dissemination throughout the body of miliary granulations (acute miliary tuberculosis), masses of induration, which have remained in the body long enough to become caseous, are in the great majority of cases to be found; and *secondly*, that in those cases in which miliary tubercles are sown over a much more limited region, as, *e.g.*, when they are confined to a single organ, they also spring from old lesions.

"Both of these doctrines of Buhl's are, I think, well established, and will be accepted by most pathologists, provided they are not overstated.

"They do not, however, include the ordinary case of phthisis, for the instances of phthisis in which typical miliary tubercles are to be found are comparatively very few in number. The position I wish to advance is that *infection* has to do with the development of ordinary consumption—in short, that Buhl's doctrine applies in a certain sense to the so-called infiltrated forms of induration as well as to the miliary.

"The results of experiment, as I have said, help us to understand this. If inoculation had produced only miliary lesions, we might have been disposed to *limit* infection to such lesions. The facts are otherwise. By inoculation you get miliary granulations in the serous membranes and in the choroid, but interstitial or diffused lesions in the liver, lungs, and other massive organs—so that here interstitial induration is part of an unquestionably infective process.

"By regarding the development of so-called infiltrated gray tubercle as infective, one gets rid of some difficulties. We are no longer compelled to accept the teaching of some of the French followers of Virchow, who restrict the term tuberculosis to what is called 'granulie,' or to draw too marked a line of distinction between cases of phthisis in which miliary granulations are present and those in which none can be found—or, with Niemeyer, to refuse to apply the term tuberculosis to any excepting certain rare forms of consumption.

"As to the word tuberculosis, obviously it would be a great advantage pathologically to get rid of it, as having no anatomical or chemical basis. At the same time, it must be admitted that it has a practical value, as implying a particular kind of malignancy. This malignancy stands in close relation to the infection of which I have been speaking, and, in particular, to that crowding together of new growth, whether catarrhal or adenoid, which is the essential character of an infective focus.

"In other words, if *tuberculous* as applied to any organic disease means anything, it means destructive induration—*i.e.*, that the organ is first hardened, and then becomes softened and indurated. This, for example, is the only respect in which tuberculous disease of the testicle, of the kidney, of the bone, and of the lungs all agree.

"Here I must leave off abruptly. In conclusion, let me observe, that in my judgment the question of specificity is not one of merely theoretical interest. The doctrine has, I believe, exercised an unfavourable influence both on the treatment of phthisis, and on the management of phthisical patients. It has led men to forget that consumption is influenced by the ordinary causes of inflammation, not only in its origin, but in each step of its progress; and that one most important aim in treatment must be to counteract this influence—not, of course, by returning to the antiphlogistic remedies of the past, nor indeed by any therapeutical interference whatsoever, but by bestowing on the treatment of acute catarrhal affections, whether of the pulmonary, intestinal, or genito-urinary mucous membranes, a great deal more care than has hitherto been considered necessary; and, on the other hand, by affording to the poor when actually suffering from acute disease of the lungs the means of placing themselves under protection without delay from the injurious action of cold or occupation."

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20. *Experiments on Animals with the Inoculation and Ingestion of Different Organic Substances, and Principally Tuberculous Products.*—Dr. Dubuisson read a note to the Acad. de Med., August 10th, on this subject. His experiments were performed with the assistance of MM. Tillaux, Villemin, and Grancher. Dr. D. gave a summary of his experiments, and drew from them the following conclusions:—

1. The inoculated matters are generally harmless: the nature of the matters employed do not influence the result.
2. They sometimes quickly produce derangements, and occasionally cause death by a sort of poisoning.
3. In some cases they produce lobular pneumonia, which is, perhaps, consecutive to the inoculation, and which may be confounded with tubercles.